

# SILVIES CANYON HABITAT IMPROVEMENT

## ENVIRONMENTAL ASSESSMENT OR-025-02-30

Three Rivers Resource Area  
Bureau of Land Management  
Burns District Office  
28910 Hwy 20 West  
Hines, Oregon 97738

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## CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

### A. Introduction

This Environmental Assessment (EA) is being completed to implement the Allotment Management Plans (AMPs) for the Landing Creek #7040 and Silvies Canyon #7053 Allotments. A change in management and several structural range improvements are needed to protect the Landing Creek and Silvies River riparian areas from season-long livestock grazing (see the Landing Creek and Silvies Canyon AMPs in Appendix A). The fences in these areas are in extremely poor condition due to long-term lack of maintenance. There are also areas that have not been fenced which have allowed livestock to trespass from adjacent allotments. Nine hundred and fifteen acres of juniper control is proposed to assist in keeping livestock from some of the riparian areas and help to increase flows along the stream corridors in the Landing Creek Allotment. Cutting and placement of juniper should act as a fence or physical barrier to prevent livestock from being in the riparian areas over a portion of Landing Creek. The juniper cutting will also release shrubs and forbs for livestock and wildlife forage. The project area is located approximately 13 miles north-northwest of Burns, Oregon, in T. 21 S., R. 30 E., Sections 4, 6, 7, 8, 9, 17, 18, and 34 and in T. 21 S., R. 29 E., Sections 1, 12, 13, 14, 24, and 25 (Map A). The project area is in the Landing Creek and Silvies Canyon Allotments. These allotments are characterized by riparian vegetation, sagebrush grasslands, and juniper sagebrush grasslands.

### B. Purpose

The purpose of the proposed actions is to meet the objectives in the Landing Creek Allotment and Silvies Canyon Allotment AMPs.

#### 1. Silvies Canyon Allotment Objectives

- Maintain the late seral stage in the mountain big sagebrush/bluebunch wheatgrass vegetation type, and cause an upward trend in the poor condition early and mid-seral tufted hairgrass/shrubby cinquefoil, Douglas fir/bluegrass species vegetation types.
- Cause an upward trend in the riparian habitat condition along this section of Silvies River.

#### 2. Landing Creek Allotment Objectives

- Cause an upward trend in the low and mid-seral low sagebrush/Idaho fescue, mountain big sagebrush/Idaho fescue, and western juniper/mountain big sagebrush/Thurber's needlegrass.

- Increase the availability and production of upland forbs for sage-grouse from April through mid-July in the allotment every year.
- Cause an upward trend in the riparian and wetland habitat conditions on the North and South Forks of Landing Creek.

#### C. Need

The need for the proposed action is that the current grazing system and fences do not adequately protect the riparian systems within the riparian corridors of Landing Creek or Silvies Canyon Allotments. Western juniper is rapidly encroaching into the mountain big sagebrush bunchgrass communities which is reducing plant diversity, vegetative cover, and forage availability. Juniper control could help reduce livestock use along stream corridors by placement of the downed juniper to make a physical barrier to livestock and big game species. Juniper control would improve stream flows in the Landing Creek Allotment by allowing water normally stored in junipers to be utilized by other vegetation and excess to flow to the stream both above and below ground. There are several aspen patches which would improve by western juniper reduction.

The riparian areas of Landing Creek and Silvies Canyon Allotments have unauthorized and trespass livestock during the latter part of the year causing unacceptable damage to the riparian areas of the allotments. There are no allotment boundary fences on the uplands on the west side of Silvies Canyon Allotment and the current fences around the Silvies Canyon and Landing Creek Allotments are in extremely poor condition. Currently, water quality does not meet Oregon Department of Environmental Quality standards on the Silvies River of which Landing Creek is a tributary. Range improvements are needed to facilitate a grazing system that would improve water quality in Landing Creek and the Silvies River by reducing fecal matter, siltation, and by reestablishment and maintenance of riparian vegetation.

#### D. Conformance

This project is in conformance with the Three Rivers Resource Management Plan (RMP) of 1992, Standards and Guidelines for Livestock Grazing on Public Lands in Oregon and Washington (August 1997), the Landing Creek and Silvies Canyon AMPs of 2002 and all State, local and Tribal laws, regulations and land use plans.

### CHAPTER II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

#### A. Proposed Action

This alternative would protect two riparian areas from overuse by livestock and develop one water source to improve riparian conditions and livestock distribution. The proposed action is to:

Maintain a two pasture graze/rest system in the Landing Creek Allotment and a fall 2-day

trail through the Silvies Canyon Allotment. Implement the grazing system and all portions of the AMPs as described in Appendix A

Construct approximately 5.5 miles of 3-strand barbed wire fence along the east and west rims and the south end of Silvies Canyon Allotment (Map B).

Remove approximately 1.2 miles of fence on the northwest corner of the Landing Creek Allotment boundary.

Reconstruct approximately 12 miles of 3-strand barbed wire of the Landing Creek boundary fence on all sides of the Allotment (Map B).

Construct approximately 1-mile of 3-strand barbed wire fence along the northwest corner of Landing Creek Allotment (Map B).

Construct approximately one-half mile of 4-strand fence around the reservoir in Section 8 NW $\frac{1}{4}$ SW $\frac{1}{4}$  (Map B).

Develop one spring in T. 21 S., R. 30 E., Section 6 NE $\frac{1}{4}$ SE $\frac{1}{4}$  (Map B).

Cut approximately 915 acres of western juniper around the spring area and in several areas along the stream corridor and around aspen patches in T. 21 S., R. 30 E., Sections 4, 5, 6, 7, 8, 9, and 17 and in T. 21 S., R. 29 E., Sections 1 and 135 (Map B).

Fence construction and reconstruction would be three wires for upland fences and four wires near water sources such as creeks and spring collection and overflow areas. All fences would be constructed to Bureau standards with the top two or three wires barbed and the bottom one smooth. The fence would follow the design specifications for minimizing restrictions to wildlife movement as outlined in Appendix 12 of the Three Rivers RMP and BLM Manual Handbook H-1741-1. Five and one-half foot green steel posts at 22-foot intervals would be used to support the fence. Wire spacing for 4-wire fences shall be measured from the ground: top wire – 42 inches, second wire – 30 inches, third wire – 22 inches, and bottom wire – 16 inches. Wire spacing for 3-wire fences shall be measured from the ground: top wire – 42 inches, second wire – 30 inches, and bottom wire – 18 inches. The spring would be developed and fenced according to standard procedures and design elements, which includes the interception of flow, a collection device, approximately 300 feet of pipeline and one water trough. The water trough would have a float system on it to provide water on demand which will maintain free-flowing water at the spring source. Ramps, rocks or float boards would be provided in all water troughs for birds and mammals to gain access to and/or escape from the water. Juniper control will be accomplished using hazardous fuel reduction procedures.

B. No Action Alternative

This alternative would maintain the current management with no new spring developments, fencing, reconstruction of boundary fences or juniper control.

CHAPTER III: AFFECTED ENVIRONMENT

The following resources are not known to be present or expected to be affected by either alternative: Wilderness, Wilderness Study Areas, Areas of Critical Environmental Concerns, Wild and Scenic Rivers, minority or economically depressed populations, prime farmlands, paleontology, floodplains or hazardous materials.

A. Critical Elements

1. Cultural Heritage and American Indian Religious Concerns

The area of effect has not been surveyed for cultural resources at this time. The project area will be inventoried for archaeological sites and paleontological localities prior to project implementation.

2. Noxious Weeds

The noxious weeds, whitetop and Canada thistle, are in the Silvies Canyon Allotment and both Russian knapweed and Dalmatian toadflax are near the Silvies Canyon Allotment. Perennial pepperweed is downstream from the Silvies Canyon Allotment. The Landing Creek Allotment has Canada thistle in the allotment and is upstream from the Silvies Canyon Allotment.

3. Special Status Fauna

Nesting and brood-rearing habitat for greater sage-grouse, a Special Status species, occurs within the proposed project area. Three greater sage-grouse leks are located approximately 2 to 3 miles from the proposed project area.

Habitat for the Columbia spotted frog, a Federal candidate for listing as threatened or endangered, occurs within the proposed project area. No Columbia spotted frogs are known to occur in this habitat but further inventory will take place prior to project implementation.

Great Basin redband trout (*Oncorhynchus mykiss* ssp.), a Bureau tracking species in Oregon and Malheur mottled sculpin (*Cottus bairdi*), a Bureau sensitive species in Oregon are both present in the area affected by the proposed action.



4. Special Status Flora

There are known sites of long-flowered lousewort (*Pedicularis centranthera*) in the project vicinity. This is a Bureau tracking species on the Oregon Natural Heritage Program List 3. This species may be threatened or endangered in Oregon (Oregon Natural Heritage Program).

There is high probability that Deschutes milkvetch (*Astragalus tegetariodes*) occurs in the Silvies Canyon Allotment. This species is relatively tolerant of disturbance. It is a Bureau sensitive species and a Federal species of concern.

There is a possibility of Raven's biscuitroot (*Lomatium ravenii*) in the Silvies Canyon Allotment. It is a Bureau Assessment species on the Oregon Natural Heritage Program List 2. Tolerance for disturbance of this species is unknown at this time.

5. Water Quality

No formal monitoring for water quality has been conducted in the Silvies River and Landing Creek within the Landing Creek or Silvies Canyon Allotments. However, current assessments of these streams indicate that water quality standards are not being met. Both the Silvies River and Landing Creek herbaceous riparian vegetation components are reduced within these allotments. The Silvies River and Landing Creek appear to have high percentage of actively eroding streambanks, and a high sediment load within these allotments. These conditions degrade water quality by increasing turbidity, reducing dissolved oxygen levels, and increasing water temperatures.

6. Wetlands/Riparian Zones

Activities including logging, mining, railroad, roads, and grazing on public and private land in the Silvies River watershed have contributed to the degradation of riparian conditions in the proposed project area. The river has downcut 8 to 10 feet leaving the previously established riparian vegetation perched well above the new water table. The river is currently creating a new floodplain at the new, lower elevation of the water. In order to create this new floodplain the river must erode back the high, vertical banks.

During this erosive process, large sections of vertical, eroding streambank will continue to be the norm until the river has created a new floodplain of adequate size.

Proper Functioning Condition (PFC) Assessments, completed by an interdisciplinary team in the field in 1998, rated the affected area of Silvies River as functional at-risk with an upward trend and Landing Creek as properly functioning. Conditions have not changed for this segment of Silvies River since that assessment. Landing Creek has since had problems with trespass grazing. During an on-site visit in the 2003 field season active downcutting from a headcut, excessive streambank alteration, and heavily grazed streamside vegetation was observed. Although no formal PFC Assessment was performed, these signs indicate that Landing Creek is no longer in PFC. A PFC Assessment (lentic) had not been conducted for the spring sources which are proposed for development.

Construction of a spring enclosure around the spring head and overflow areas would prevent livestock access to the spring. This should help improve the riparian function around the spring due to reduction of trampling and vegetation removal. Improved riparian plant structure should help to hold water within the spring head. The use of a float valve system in the stock trough will assure that water would flow at the spring source when the trough was full. The use of the spring is short term from May through June and should not affect riparian water flow except during the use period.

B. Noncritical Elements

1. Range

a. Vegetation

Major vegetation types in the Landing Creek Allotment are primarily a low sagebrush/Idaho fescue–rigid sagebrush/bottlebrush squirreltail complex, a low sagebrush/Idaho fescue–western juniper/mountain big sagebrush/Idaho fescue complex, and a mountain big sagebrush/Idaho fescue–low sagebrush/bluebunch wheatgrass complex. Major vegetation types in the Silvies Canyon Allotment are primarily Douglas fir/bluegrass species complex, and a tufted hairgrass/shrubby cinquefoil//basin big sagebrush/Sandberg’s bluegrass complex. The upland plant communities in both allotments are generally in fair to good condition.

b. Soils

Major soils are:

Landing Creek Allotment

- Merlin; Ateron; Ticino complex has range sites of Mountain Claypan, a mountain very shallow and a shrubby mountain clayey site all in a 12 to 16-inch precipitation zone with a 2 to 20 percent slope; potential plants include low sagebrush/Idaho fescue/bluebunch wheatgrass/one-spike oatgrass; rigid sagebrush/one spike oatgrass/Sandberg's bluegrass/; and bitterbrush/mountain big sagebrush/Idaho fescue; the general range association is mountain big sagebrush/low sagebrush or stiff sagebrush/Idaho fescue with moderate water erosion, low wind erosion on hills and tablelands with an elevation from 3,900 to 5,200 feet; textures are very cobbly loam or very stony loam of shallow depths which is well-drained with a capability class of 6e;4e.
- Erkatak; Merlin; Westbutte complex has range sites of mountain north; mountain claypan; mountain south all in a 12 to 16-inch precipitation zone and 10 to 60 percent slopes; potential plants include mountain big sagebrush/Idaho fescue/; low sagebrush/Idaho fescue/bluebunch wheatgrass/one-spike oatgrass; and mountain big sagebrush/bluebunch wheatgrass/Idaho fescue; the general range association is mountain big sagebrush/low sagebrush; or stiff sagebrush/Idaho fescue with moderate water erosion, low wind erosion on canyonsides and hillsides with an elevation from 4,400 to 5,000 feet; textures are very cobbly loam or very stony loam of moderate or shallow depth which is well-drained with a capability class of 6e.
- Westbutte; Rock outcrop complex has range sites of mountain south, and miscellaneous land types in a 12 to 16-inch precipitation zone and 20 to 60 percent slopes; potential plants include mountain big sagebrush/bluebunch wheatgrass/Idaho fescue; the general range association is mountain big sagebrush/low sagebrush or stiff sagebrush/Idaho fescue with moderate water erosion, low wind erosion on south and west facing canyonsides, hillsides, and escarpments, with an elevation from 4,200 to 5,100 feet; textures are very stony loam or unweathered bedrock of shallow depth which is well-drained with a capability class of 6e.

Four percent of the soils are in a stable erosion condition class, 12 percent are in a slight erosion condition class, 6 percent are in a stable/slight erosion condition complex, 20 percent are in a moderate erosion condition class, and 58 percent of the soils are in a slight/moderate erosion condition complex in the Landing Creek Allotment.

Silvies Canyon Allotment:

- Welch; Roschene; Cumulic, Haploxerolls complex, has range sites of mountain meadow; mountain loamy bottom; and mountain braided bottom in a 12 to 16-inch precipitation zone and 0 to 3 percent slopes; potential plants include tufted hairgrass/sedges/rushes/willows/basin wildrye/and willows/sedges/tufted hairgrass/the general range association is ponderosa pine/mountain big sagebrush/Idaho fescue/elk sedge with low water erosion, low wind erosion on low stream terraces; textures are loamy of deep depth which is poorly to very poorly; well to moderately well; or somewhat poorly to poorly drained with a capability class of 6e.
- Gaib; Rock outcrop complex has range sites of ponderosa pine/bitterbrush/mountain big sagebrush; or miscellaneous land types in a 16 to 18-inch precipitation zone and 20 to 60 percent slopes; potential plants include ponderosa pine/bitterbrush/mountain big sagebrush/Idaho fescue/the general range association is ponderosa pine/mountain big sagebrush/Idaho fescue/elk sedge with very high water erosion, low wind erosion on canyonsides and hillsides; textures are gravelly loam or unweathered bedrock of shallow depth which is well-drained with a capability class of 6e.

Forty-six percent of the soils are in a stable erosion condition class, 27 percent are in a slight erosion condition class, 10 percent are in a stable/slight erosion condition complex, and 17 percent of the soils are in a stable/slight/moderate erosion condition complex in the Silvies Canyon Allotment.

c. Livestock Management

Prescribed livestock management is a two pasture graze/rest rotation system on the Landing Creek Allotment and a one pasture deferred 2-day fall trail through the Silvies Canyon Allotment as specified in the AMPs (Appendices 1 and 2). Presently both allotments have poor or nonexistent fences which allow livestock to drift in from other areas at all times of the grazing season causing unacceptable damage. The north fence on the Silvies Canyon Allotment was rebuilt in 2003. There are three feral pigs in the area of the Silvies Canyon Allotment which could become harmful if they expand their numbers.

2. Wildlife

The Landing Creek and Silvies Canyon Allotments support a diversity of wildlife. There are deer, elk, pronghorn antelope, coyote, bobcat, cougar, California quail, sage-grouse, osprey, red-tailed hawks, western fence lizard, sagebrush lizard, and numerous other species common to the ponderosa pine and sagebrush/steppe habitats.

3. Recreation and Visual Resources

Recreation values are high within the Landing Creek and Silvies Canyon Allotments. Recreational opportunities include driving for pleasure, hunting, hiking, fishing, and rock-hounding. The area of consideration is within Visual Resource Management Class IV which provides for changes to the landscape.

4. Fish and Aquatic Resources

Great Basin redband trout (*Oncorhynchus mykiss* ssp.), a Bureau tracking species in Oregon and Malheur mottled sculpin (*Cottus bairdi*), a Bureau sensitive species in Oregon are both present in the area affected by the proposed action. Other native and nonnative fish as well as invertebrates and aquatic plants are also present in the proposed project area. Aquatic habitat conditions are degraded. The Silvies River and Landing Creek both have reduced herbaceous riparian vegetation, not all classes of riparian deciduous woody species are present and they appear to have a high percentage of actively eroding streambanks and a high sediment load. A high amount of sediment in stream substrate reduces quality spawning and rearing habitat for both trout and sculpin. High sediment also reduces the aquatic invertebrate populations that these fish rely on as a food source. Lack of a diverse riparian community and eroding banks reduces the quality and quantity of fish habitat.

## CHAPTER IV: ENVIRONMENTAL CONSEQUENCES AND MITIGATIONS

### A. Alternative I - Proposed Action

#### Critical Elements

##### 1. Cultural Heritage and American Indian Religious Concerns

Significant sites would be protected by project design and avoidance. If a previously undetected archaeological site were identified during project implementation, work would be stopped immediately in order to assess the significance of the resource and formulate mitigation measures. Project work would resume when the Section 106 process was completed.

##### 2. Noxious Weeds

Improvement in riparian and upland conditions would assist in helping reduce the spread of invasive nonnative vegetation. Weed infestations would be prevented and/or reduced by adherence to the Burns District noxious weed plan.

##### 3. Special Status Fauna

Sage-grouse habitat would be improved by improved riparian and meadow habitat quality due to livestock management and juniper control. Spotted frog habitat would improve. Design modification of the fence(change of location or type of fence), springs (type of spring development or avoidance of development), and/or juniper control (size or shape or type of control) may be recommended for Special Status animals.

Habitat for Great Basin redband trout and Malheur mottled sculpin would improve as riparian vegetation and stream channel conditions improved. Improved riparian vegetation and stream channel conditions would increase streambank stability, capture sediment, reduce water velocity and erosion by creating a capture and release system that helps to stabilize stream energy associated with high flows. Since high sediment loads disrupt spawning, lower dissolved oxygen levels and reduce foraging success of aquatic organisms, increasing streambank stability would help to remove these harmful effects on Great Basin redband trout and Malheur mottled sculpin.

##### 4. Special Status Flora

A site-specific botanical clearance will be completed in the appropriate season prior to project construction. Mitigation could include moving the project location if Special Status plant populations are located in the project area.

##### 5. Water Quality

The fence and water developments would facilitate a livestock grazing system that would help to improve water quality in Silvies River and Landing Creek by reducing fecal matter, streambank erosion, and by reestablishment of riparian filtering vegetation. Streambank stability, shade, and cover would increase in the reach of the streams affected by the plan analyzed in this EA. Stabilization of streambanks and an improved overstory would provide high quality aquatic habitat through development of pools and undercut banks, as well as the recruitment of fine woody debris to the stream. The increased quantity, and distribution and vigor of riparian vegetation as well as an increase in bank stability would reduce stream sedimentation.

Development of the spring for livestock watering could alter the natural flow regime of the spring and could negatively impact water quality. Troughs with float valves are proposed to mitigate these possible impacts. Building an enclosure around the spring source would protect it from livestock, which may have more impacts to the spring than other ungulates. Keeping livestock out of the spring areas would allow riparian vegetation and aquatic habitat conditions to improve which would improve water quality at the springs.

#### 6. Wetland/Riparian Zones

Removal of the juniper from around the spring could increase the spring's flow. It will also cause a short-term increase of solar radiation to directly hit the spring, causing a rise in water temperature that could affect riparian conditions altering the biota at the spring. This would be a short-term impact. The riparian deciduous woody communities would grow and replace the downed juniper, which will produce a natural overstory providing shading of the spring source and reducing solar heating. Over time the functioning condition of Silvies River would improve from “functioning at-risk with an upward trend” to “properly functioning.” As riparian vegetation communities continue to move toward later seral stages with deep root masses and an increasing deciduous woody species component, the streambanks would stabilize, thereby reducing erosion, turbidity and sediment loading. The deciduous woody riparian species would also provide streambank cover, reducing solar radiation which would help prevent an increase to the water temperature. As the new floodplain develops there would be higher floodwater retention and ground water recharge.

In general, the river would have more channel characteristics, resulting in greater habitat diversity causing an overall increase in biodiversity.

## Noncritical Elements

### 1. Range

#### a. Vegetation

Upland and riparian conditions would improve as plants are given an opportunity to reproduce and gain vigor under a graze/rest or a 2-day trail through deferred rotation system. Some areas along the new fence and near the developed springs would have increased use by livestock, but overall trend in range condition would move upward. The development of a spring would improve livestock distribution, resulting in decreased utilization in areas currently receiving heavy to severe utilization.

#### b. Soils

Soil conditions would improve along the riparian corridor as the increased vegetation cover provides sediment retention. The upland soils would be maintained by the vegetation increase due to use during times when the plants are not actively growing. Until animals get used to the new fence boundaries, soil compaction could be greater along some of the fences due to increased livestock trailing along the fences.

#### c. Livestock Management

Livestock management would function as described in the AMPs (Appendices 1 and 2) with the construction of protection fences, spring developments, and boundary fence reconstruction. The reduced trespass livestock grazing would improve plant vigor and condition and improve overall range condition. The changes in plant community composition with increases in forage species as well as improvement in vigor and condition of the plants could increase forage value on the allotment with associated weight gains for the livestock.

### 2. Wildlife

Construction of the fences should have no direct impact on wildlife. Development of the spring would allow for healthier creek and spring riparian areas including an increase in plant community diversity in the creek and spring areas and improved water quality. The anticipated riparian improvement would be beneficial to a multitude of wildlife species that utilize good quality riparian habitat.



3. Recreation and Visual Resources

There would be a slight change in the visual aspects of the area with new fence lines and grazing use contrast. Hunting opportunities would be little affected by the proposed action. Upland and riparian areas visual aspects will be improved by livestock management and juniper control. Off Highway Vehicle use would not be affected.

4. Fish and Aquatic Resources

Development of the springs could increase or decrease water availability at the springs. Heavy equipment used during construction as well as an increase in water consumption could alter the hydrology of the site changing the volume of water flowing from the spring. More or less flow would alter the biota naturally found at the spring. A recent study in Nevada concluded that 50 percent of the aquatic taxa endemic to the Great Basin (78 percent of which occupy springs) had declined due to diversion impacts. It was found that biological diversity was greater in larger and undisturbed springs and that nonnative taxa comprised a greater proportion of the riparian vegetation at disturbed springs. The diversions decreased biological diversity by reducing aquatic habitat and reducing soil moisture in riparian zones (USDI, 2001). The float system in the trough will assist in reducing unnecessary diversions helping to maintain water at the spring source, however, depending on actual use and the natural flow regime, water flows could be reduced if the water consumption is high and the ground water is depleted.

B. Alternative I – No Action Alternative

Critical Elements

1. Cultural Heritage and American Indian Religious Concerns

No changes would occur.

2. Noxious Weeds

Noxious weeds would continue to expand and move to adjacent sites. Species of noxious weeds would invade disturbed and overgrazed sites with the continuance of trespass livestock.

3. Special Status Fauna

Trespass livestock would continue to impact the area. Low quality aquatic habitat would not improve for Great Basin redband trout or Malheur mottled sculpin.

4. Special Status Flora

No changes would occur.

5. Water Quality

Water quality in Landing Creek would remain static or continue to deteriorate and there could be an increase in water temperature, soil erosion, and stream sedimentation and encroachment of nonriparian vegetation into riparian areas. Conditions in Silvies River may remain stable or improve at a reduced level.

6. Wetlands/Riparian Zones

Riparian conditions at Landing Creek would not improve under this alternative. Trespass livestock would continue to be the dominant force in riparian degradation. Nonriparian vegetation could increase in riparian areas. Silvies River may remain stable or improve at a reduced level. If trespass continues along the Silvies River, conditions may deteriorate to functioning with a downward trend.

7. Noncritical Elements

a. Range

(1) Vegetation

The uplands would retain a stable trend in range condition and nonnative invasive species would continue to invade the native rangelands at the current rate.

(2) Soils

Soil conditions along the riparian corridor would continue to deteriorate during high flow events. The upland soils would be maintained by the present vegetation.

(3) Livestock Management

Trespass would continue due to lack of adequate fences. Use supervision and trespass citations would increase. Prescribed management would continue to the extent possible without further damage to watershed conditions.

8. Wildlife

Under the No Action Alternative the multilayered structure of riparian habitat predicted in the proposed action would not be achieved. This lack of multilayered structure would be detrimental to species such as ruby-crowned kinglet and Williamsons sapsucker which nest and feed in mid to upper portions of deciduous riparian species. Sufficient residual ground cover would not be carried over from one year to the next which would make ground-nesting birds such as the mallard more susceptible to predation. Heavy utilization of herbaceous and woody riparian vegetation during late summer and early fall would also remove an important forage component for wild ungulates, primarily mule deer and Rocky Mountain elk.

9. Recreation and Visual Resources

No changes would occur.

10. Fish and Aquatic Resources

The continued lack of vegetation along the streams would keep the aquatic resources at a minimum and fisheries would not improve and may disappear.

C. Cumulative Impacts

1. Proposed Action

Cumulative impacts are improved riparian habitat, decreased sedimentation of streams, improve water quality, and improved watershed condition. There are at present approximately 9 miles of fence and one spring that has been developed. At present the spring that was developed has become nonfunctional and is flowing freely at the spring head. There would be an additional 4.25 miles of fenceline and one additional spring development. These changes would benefit wildlife by assuring that livestock controls would be sufficient to assist in prevention of unauthorized livestock use. Wildlife would not be affected as the fences will be constructed for wildlife passage concerns.

2. No Action Alternative

Cumulative impacts are degraded riparian habitat, increased sedimentation of streams, further degradation of water quality, and degraded watershed conditions. Juniper would continue to increase toward a juniper woodland state which would reduce mountain big sagebrush/bunchgrass and aspen communities. This would result in loss of plant diversity, an increase in overland flow with an increased potential for accelerated erosion.

CHAPTER V: PERSONS AND AGENCIES CONSULTED

## CHAPTER VI: CONSULTATION AND COORDINATION

4J Ranch  
Mitch Baker

## CHAPTER VII: LIST OF PREPARERS

Lindsay Aschim, Watershed Specialist  
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## CHAPTER VIII: MAPS AND APPENDICES

Map A            General Location  
Map B            Proposed Improvements and Juniper Control

Appendix 1     Silvies Canyon Allotment Management Plan  
Appendix 2     Landing Creek Allotment Management Plan

## CHAPTER IX: LITERATURE CITED

U.S. Department of Interior 2001 Riparian area management: A guide to managing, restoring, and conserving springs in the Western United States. Technical Reference 1737-17. Bureau of Land Management, Denver, Colorado. BLM/ST/ST-01/001+1737. 70 pp.

Oregon Natural Heritage Program 2001. Rare, Threatened and Endangered Plants and Animals of Oregon. Oregon Natural Heritage Program, Portland, Oregon. 94pp.